Installing ping command


```
Command Prompt                                                              —   □   ×

Microsoft Windows [Version 10.0.19041.985]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Kennedey>docker pull ubuntu:16.04
16.04: Pulling from library/ubuntu
Digest: sha256:9775877f420d453ef790e6832d77630a49b32a92b7bedf330adf4d8669f6600e
Status: Image is up to date for ubuntu:16.04
docker.io/library/ubuntu:16.04

C:\Users\Kennedey>docker images
REPOSITORY    TAG        IMAGE ID        CREATED        SIZE
ubuntu        16.04      9ff95a467e45    2 weeks ago    135MB

C:\Users\Kennedey>docker run -it ubuntu:16.04 /bin/bash
root@3f11e86a59da:/# ping google.com
bash: ping: command not found
root@3f11e86a59da:/# apt-get update
Get:1 http://archive.ubuntu.com/ubuntu xenial InRelease [247 kB]
Get:2 http://security.ubuntu.com/ubuntu xenial-security InRelease [109 kB]
Get:3 http://security.ubuntu.com/ubuntu xenial-security/main amd64 Packages [2051 kB]
Get:4 http://archive.ubuntu.com/ubuntu xenial-updates InRelease [109 kB]
Get:5 http://archive.ubuntu.com/ubuntu xenial-backports InRelease [107 kB]
Get:6 http://archive.ubuntu.com/ubuntu xenial/main amd64 Packages [1558 kB]
Get:7 http://archive.ubuntu.com/ubuntu xenial/restricted amd64 Packages [14.1 kB]
Get:8 http://archive.ubuntu.com/ubuntu xenial/universe amd64 Packages [9827 kB]
Get:9 http://security.ubuntu.com/ubuntu xenial-security/restricted amd64 Packages [15.9 kB]
Get:10 http://security.ubuntu.com/ubuntu xenial-security/universe amd64 Packages [984 kB]
Get:11 http://security.ubuntu.com/ubuntu xenial-security/multiverse amd64 Packages [8820 B]
Get:12 http://archive.ubuntu.com/ubuntu xenial/multiverse amd64 Packages [176 kB]
Get:13 http://archive.ubuntu.com/ubuntu xenial-updates/main amd64 Packages [2559 kB]
Get:14 http://archive.ubuntu.com/ubuntu xenial-updates/restricted amd64 Packages [16.4 kB]
Get:15 http://archive.ubuntu.com/ubuntu xenial-updates/universe amd64 Packages [1544 kB]
Get:16 http://archive.ubuntu.com/ubuntu xenial-updates/multiverse amd64 Packages [26.2 kB]
Get:17 http://archive.ubuntu.com/ubuntu xenial-backports/main amd64 Packages [10.9 kB]
Get:18 http://archive.ubuntu.com/ubuntu xenial-backports/universe amd64 Packages [12.7 kB]
Fetched 19.4 MB in 54s (355 kB/s)
Reading package lists... Done
root@3f11e86a59da:/# apt-get install iputils-ping
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  libffi6 libgmp10 libgnutls-openssl27 libgnutls30 libhogweed4 libidn11 libnettle6 libp11-kit0 libtasn1-6
Suggested packages:
  gnutls-bin
The following NEW packages will be installed:
  iputils-ping libffi6 libgmp10 libgnutls-openssl27 libgnutls30 libhogweed4 libidn11 libnettle6 libp11-kit0 libtasn1-6
0 upgraded, 10 newly installed, 0 to remove and 5 not upgraded.
Need to get 1307 kB of archives.
After this operation, 3781 kB of additional disk space will be used.
Do you want to continue? [Y/n] Y
```

Continuation of above


```
Do you want to continue? [Y/n] Y
Get:1 http://archive.ubuntu.com/ubuntu xenial/main amd64 libgmp10 amd64 2:6.1.0+dfsg-2 [240 kB]
Get:2 http://archive.ubuntu.com/ubuntu xenial-updates/main amd64 libnettle6 amd64 3.2-1ubuntu0.16.04.2 [93.7 kB]
Get:3 http://archive.ubuntu.com/ubuntu xenial-updates/main amd64 libhogweed4 amd64 3.2-1ubuntu0.16.04.2 [136 kB]
Get:4 http://archive.ubuntu.com/ubuntu xenial-updates/main amd64 libidn11 amd64 1.32-3ubuntu1.2 [46.5 kB]
Get:5 http://archive.ubuntu.com/ubuntu xenial/main amd64 libffi6 amd64 3.2.1-4 [17.8 kB]
Get:6 http://archive.ubuntu.com/ubuntu xenial-updates/main amd64 libp11-kit0 amd64 0.23.2-5~ubuntu16.04.2 [107 kB]
Get:7 http://archive.ubuntu.com/ubuntu xenial-updates/main amd64 libtasn1-6 amd64 4.7-3ubuntu0.16.04.3 [43.5 kB]
Get:8 http://archive.ubuntu.com/ubuntu xenial-updates/main amd64 libgnutls30 amd64 3.4.10-4ubuntu1.8 [548 kB]
Get:9 http://archive.ubuntu.com/ubuntu xenial-updates/main amd64 libgnutls-openssl27 amd64 3.4.10-4ubuntu1.8 [21.9 kB]
Get:10 http://archive.ubuntu.com/ubuntu xenial/main amd64 iputils-ping amd64 3:20121221-5ubuntu2 [52.7 kB]
Fetched 1307 kB in 5s (253 kB/s)
debconf: delaying package configuration, since apt-utils is not installed
Selecting previously unselected package libgmp10:amd64.
(Reading database ... 4785 files and directories currently installed.)
Preparing to unpack .../libgmp10_2%3a6.1.0+dfsg-2_amd64.deb ...
Unpacking libgmp10:amd64 (2:6.1.0+dfsg-2) ...
Selecting previously unselected package libnettle6:amd64.
Preparing to unpack .../libnettle6_3.2-1ubuntu0.16.04.2_amd64.deb ...
Unpacking libnettle6:amd64 (3.2-1ubuntu0.16.04.2) ...
Selecting previously unselected package libhogweed4:amd64.
Preparing to unpack .../libhogweed4_3.2-1ubuntu0.16.04.2_amd64.deb ...
Unpacking libhogweed4:amd64 (3.2-1ubuntu0.16.04.2) ...
Selecting previously unselected package libidn11:amd64.
Preparing to unpack .../libidn11_1.32-3ubuntu1.2_amd64.deb ...
Unpacking libidn11:amd64 (1.32-3ubuntu1.2) ...
Selecting previously unselected package libffi6:amd64.
Preparing to unpack .../libffi6_3.2.1-4_amd64.deb ...
Unpacking libffi6:amd64 (3.2.1-4) ...
Selecting previously unselected package libp11-kit0:amd64.
Preparing to unpack .../libp11-kit0_0.23.2-5~ubuntu16.04.2_amd64.deb ...
Unpacking libp11-kit0:amd64 (0.23.2-5~ubuntu16.04.2) ...
Selecting previously unselected package libtasn1-6:amd64.
Preparing to unpack .../libtasn1-6_4.7-3ubuntu0.16.04.3_amd64.deb ...
Unpacking libtasn1-6:amd64 (4.7-3ubuntu0.16.04.3) ...
Selecting previously unselected package libgnutls30:amd64.
Preparing to unpack .../libgnutls30_3.4.10-4ubuntu1.8_amd64.deb ...
Unpacking libgnutls30:amd64 (3.4.10-4ubuntu1.8) ...
Selecting previously unselected package libgnutls-openssl27:amd64.
Preparing to unpack .../libgnutls-openssl27_3.4.10-4ubuntu1.8_amd64.deb ...
Unpacking libgnutls-openssl27:amd64 (3.4.10-4ubuntu1.8) ...
Selecting previously unselected package iputils-ping.
Preparing to unpack .../iputils-ping_3%3a20121221-5ubuntu2_amd64.deb ...
Unpacking iputils-ping (3:20121221-5ubuntu2) ...
Processing triggers for libc-bin (2.23-0ubuntu11.2) ...
Setting up libgmp10:amd64 (2:6.1.0+dfsg-2) ...
Setting up libnettle6:amd64 (3.2-1ubuntu0.16.04.2) ...
Setting up libhogweed4:amd64 (3.2-1ubuntu0.16.04.2) ...
Setting up libidn11:amd64 (1.32-3ubuntu1.2) ...
Setting up libffi6:amd64 (3.2.1-4) ...
Setting up libp11-kit0:amd64 (0.23.2-5~ubuntu16.04.2) ...
Setting up libtasn1-6:amd64 (4.7-3ubuntu0.16.04.3) ...
Setting up libgnutls30:amd64 (3.4.10-4ubuntu1.8) ...
Setting up libgnutls-openssl27:amd64 (3.4.10-4ubuntu1.8) ...
Setting up iputils-ping (3:20121221-5ubuntu2) ...
Setcap is not installed, falling back to setuid
Processing triggers for libc-bin (2.23-0ubuntu11.2) ...
```

Trying ping on google.com


```
root@3f11e86a59da:/# ping google.com
PING google.com (172.217.161.174) 56(84) bytes of data.
64 bytes from 172.217.161.174: icmp_seq=1 ttl=37 time=28.3 ms
64 bytes from 172.217.161.174: icmp_seq=2 ttl=37 time=31.9 ms
64 bytes from 172.217.161.174: icmp_seq=3 ttl=37 time=32.2 ms
64 bytes from 172.217.161.174: icmp_seq=4 ttl=37 time=30.8 ms
64 bytes from 172.217.161.174: icmp_seq=5 ttl=37 time=28.8 ms
64 bytes from 172.217.161.174: icmp_seq=6 ttl=37 time=30.8 ms
64 bytes from 172.217.161.174: icmp_seq=7 ttl=37 time=33.3 ms
64 bytes from 172.217.161.174: icmp_seq=8 ttl=37 time=33.0 ms
64 bytes from 172.217.161.174: icmp_seq=9 ttl=37 time=30.3 ms
64 bytes from 172.217.161.174: icmp_seq=10 ttl=37 time=32.4 ms
64 bytes from 172.217.161.174: icmp_seq=11 ttl=37 time=32.8 ms
64 bytes from 172.217.161.174: icmp_seq=12 ttl=37 time=30.6 ms
64 bytes from 172.217.161.174: icmp_seq=13 ttl=37 time=32.6 ms
64 bytes from 172.217.161.174: icmp_seq=14 ttl=37 time=31.1 ms
64 bytes from 172.217.161.174: icmp_seq=15 ttl=37 time=30.1 ms
64 bytes from 172.217.161.174: icmp_seq=16 ttl=37 time=33.0 ms
64 bytes from 172.217.161.174: icmp_seq=17 ttl=37 time=32.2 ms
64 bytes from 172.217.161.174: icmp_seq=18 ttl=37 time=32.5 ms
64 bytes from 172.217.161.174: icmp_seq=19 ttl=37 time=32.6 ms
64 bytes from 172.217.161.174: icmp_seq=20 ttl=37 time=30.8 ms
64 bytes from 172.217.161.174: icmp_seq=21 ttl=37 time=32.2 ms
64 bytes from 172.217.161.174: icmp_seq=22 ttl=37 time=32.7 ms
64 bytes from 172.217.161.174: icmp_seq=23 ttl=37 time=32.7 ms
^C
--- google.com ping statistics ---
23 packets transmitted, 23 received, 0% packet loss, time 22034ms
rtt min/avg/max/mdev = 28.339/31.699/33.397/1.341 ms
root@3f11e86a59da:/# exit
exit

C:\Users\Kennedey>
```

Committing changes (changed to powershell, encountered an issue shown in second the image after)


```
Command Prompt - powershell                                                    —   □   ✕

C:\Users\Kennedey>powershell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\Kennedey> docker ps -a
CONTAINER ID   IMAGE          COMMAND        CREATED         STATUS                 PORTS       NAMES
3f11e86a59da   ubuntu:16.04   "/bin/bash"    22 minutes ago  Exited (0) 16 minutes ago          naughty_lewin
PS C:\Users\Kennedey> docker commit --help

Usage:  docker commit [OPTIONS] CONTAINER [REPOSITORY[:TAG]]

Create a new image from a container's changes

Options:
  -a, --author string     Author (e.g., "John Hannibal Smith"
                          <hannibal@a-team.com>")
  -c, --change list       Apply Dockerfile instruction to the created image
  -m, --message string    Commit message
  -p, --pause             Pause container during commit (default true)
PS C:\Users\Kennedey> docker commit -a 'Kenneth Gonzales' -m 'Added ping utility.' 3f1 nethgonzales/ping
sha256:b1d7d5bded50e18c5669346ef7ab2ebd9f2c99207e415ed7171b944b52b27e0f
PS C:\Users\Kennedey> docker images
REPOSITORY          TAG       IMAGE ID        CREATED         SIZE
nethgonzales/ping   latest    b1d7d5bded50    21 seconds ago  170MB
ubuntu              16.04     9ff95a467e45    2 weeks ago     135MB
PS C:\Users\Kennedey> docker run -it --rm nethgonzales/ping /bin/bash
root@87add82407ef:/# ping google.com
PING google.com (172.217.161.174) 56(84) bytes of data.
64 bytes from 172.217.161.174: icmp_seq=1 ttl=37 time=30.4 ms
64 bytes from 172.217.161.174: icmp_seq=2 ttl=37 time=32.8 ms
64 bytes from 172.217.161.174: icmp_seq=3 ttl=37 time=33.3 ms
^C
--- google.com ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2002ms
rtt min/avg/max/mdev = 30.418/32.203/33.340/1.286 ms
root@87add82407ef:/# exit
exit
PS C:\Users\Kennedey>
```

Encountered issue


```
C:\Users\Kennedey>docker commit -a 'Kenneth Gonzales' -m 'Added ping utility.' 3f1 nethgonzales/ping
"docker commit" requires at least 1 and at most 2 arguments.
See 'docker commit --help'.

Usage:  docker commit [OPTIONS] CONTAINER [REPOSITORY[:TAG]]

Create a new image from a container's changes
```